

# Spreaders & Granular Deicing

- Illinois DOT District 2 (Dixon) & District 3 (Ottawa)
- Brien Keltner, Anamosa Highway Maintenance Supervisor, Iowa DOT



# Radius Body & Front Spinners



Illinois Department  
of Transportation

# Swenson Spreader



Illinois Department  
of Transportation

# Swenson Spreader



Illinois Department  
of Transportation

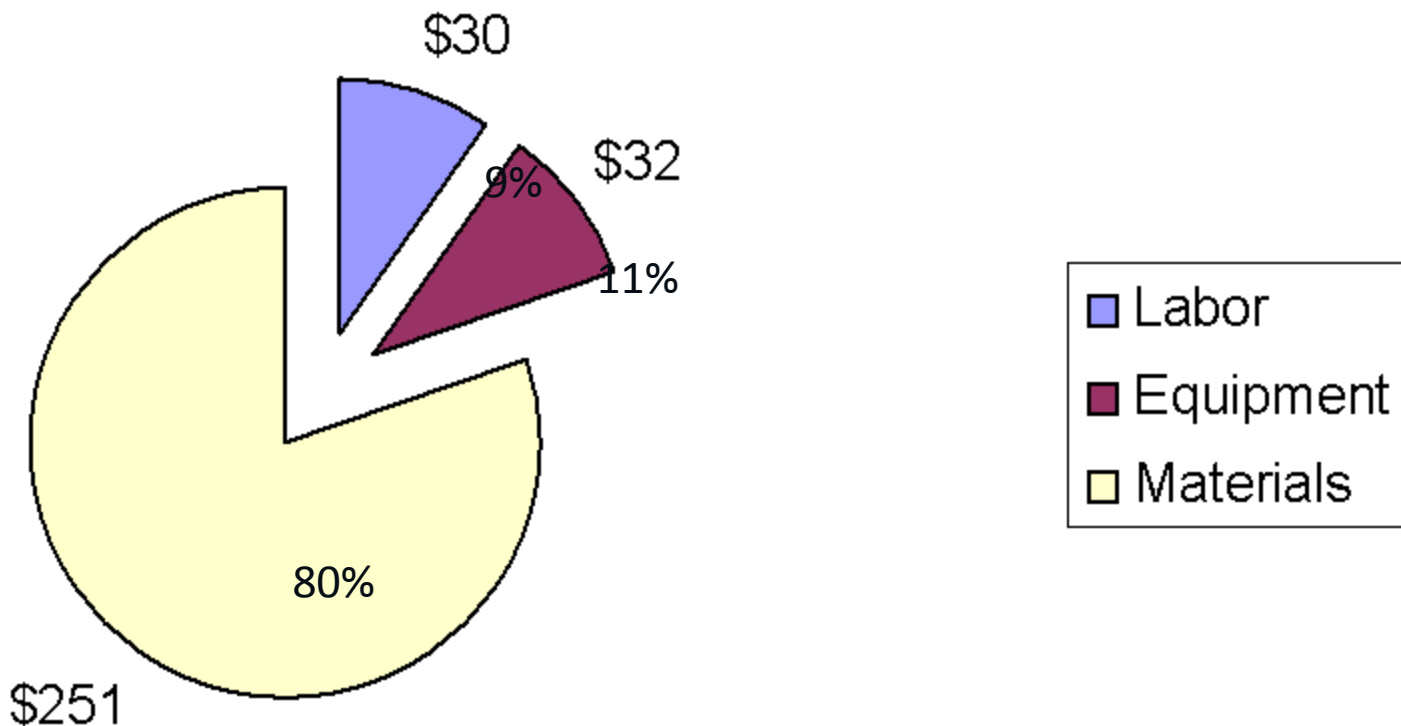


# Swenson Spreader



# Common Winter Storm Scenario

Cost breakdown for one hour of plowing & deicing at 250 lbs/LM

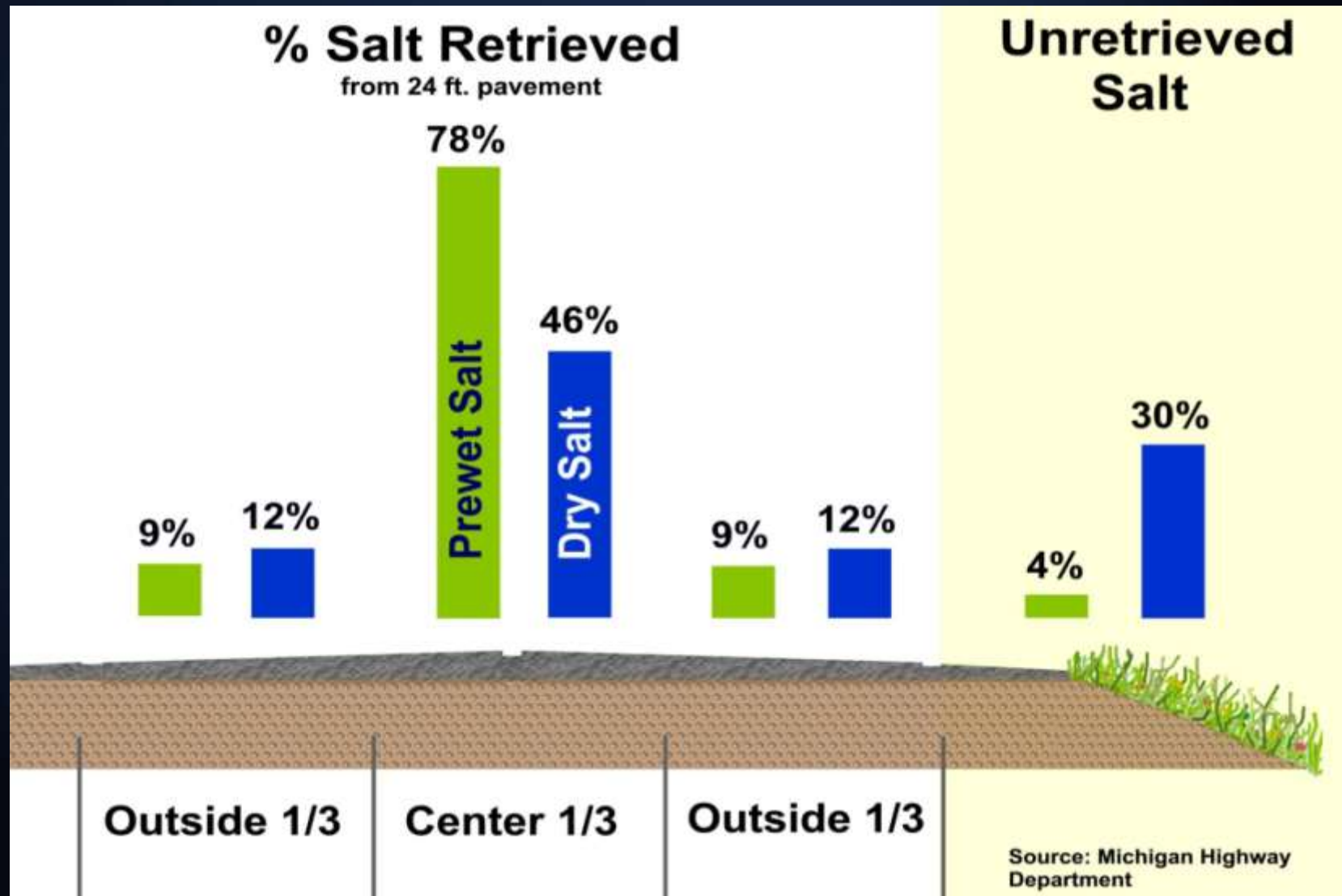


2009-'10 Estimated cost for salt = \$13,000,000 to 15,000,000

# Motivation

- Salt use makes up a large amount of our winter expenditures
- Try to maximize the benefits
  - Not too much
  - Not too little
  - Keep it on the road where it's useful
- Make it easy to practice and understand good material use

# Prewetting

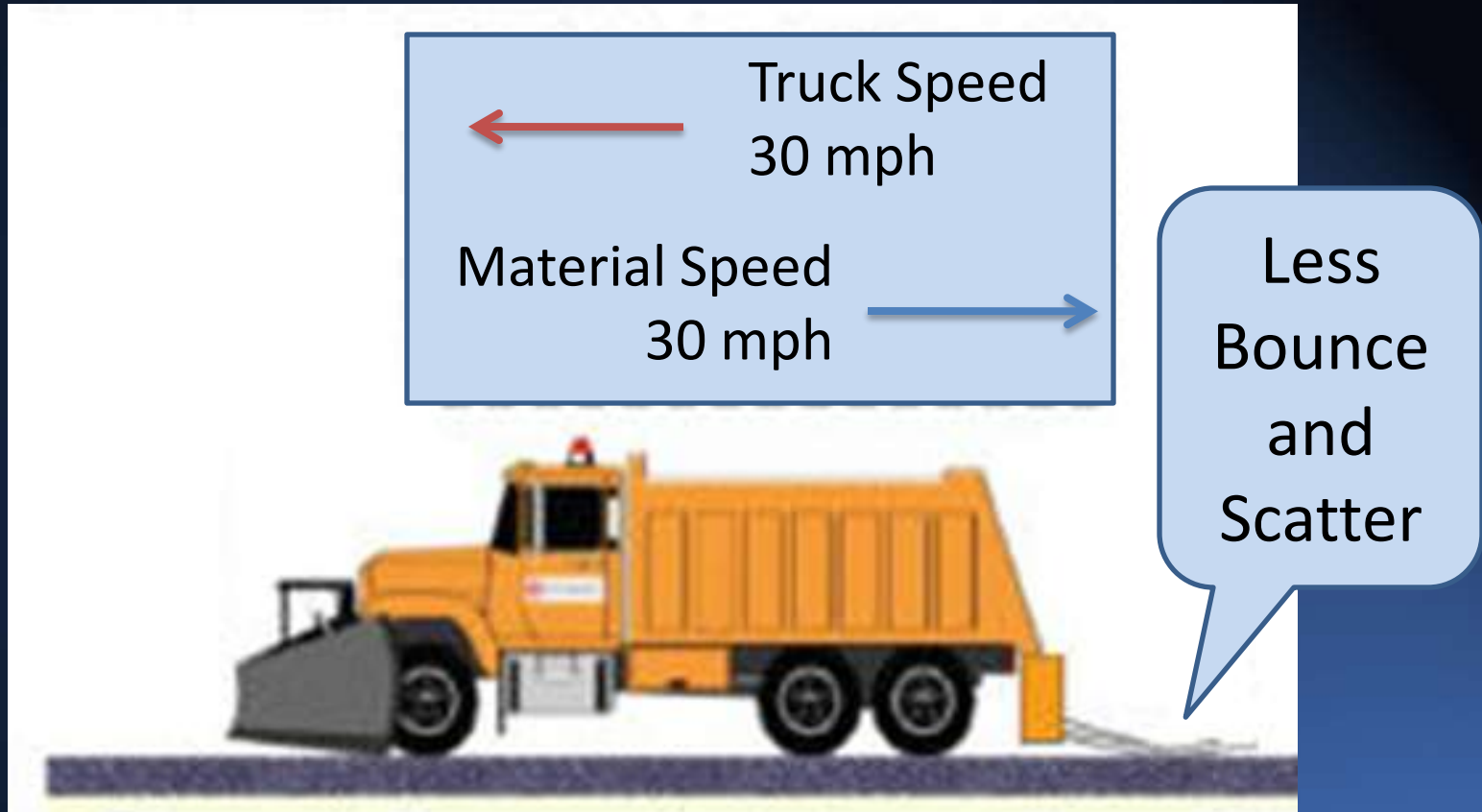




# Increased Prewetting

- Increase the amount of brine used while prewetting salt in a storm
- Dial up the brine, dial back the rock salt
- Custom spreader controller application to help calculate amount of brine and dry for a particular application rate

# Zero Velocity Spreaders



Material is dispensed at rearward speed that matches forward speed for zero velocity impact

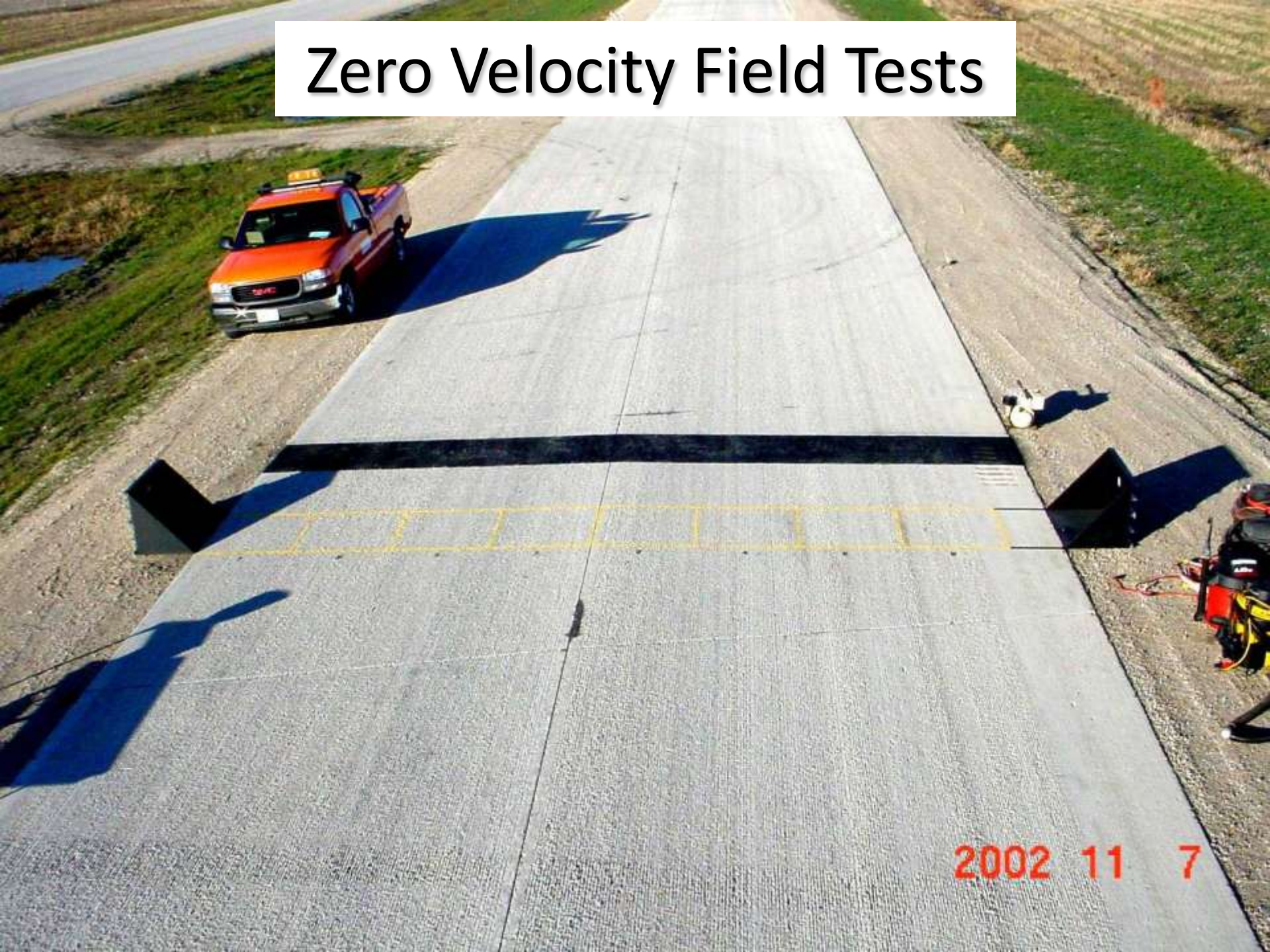


# Zero velocity spreader

- Operator can place material anywhere in the roadway
- Less bounce and scatter = more material stays on road



# Zero Velocity Field Tests



2002 11 7







# Speed Monitored By Radar and Video



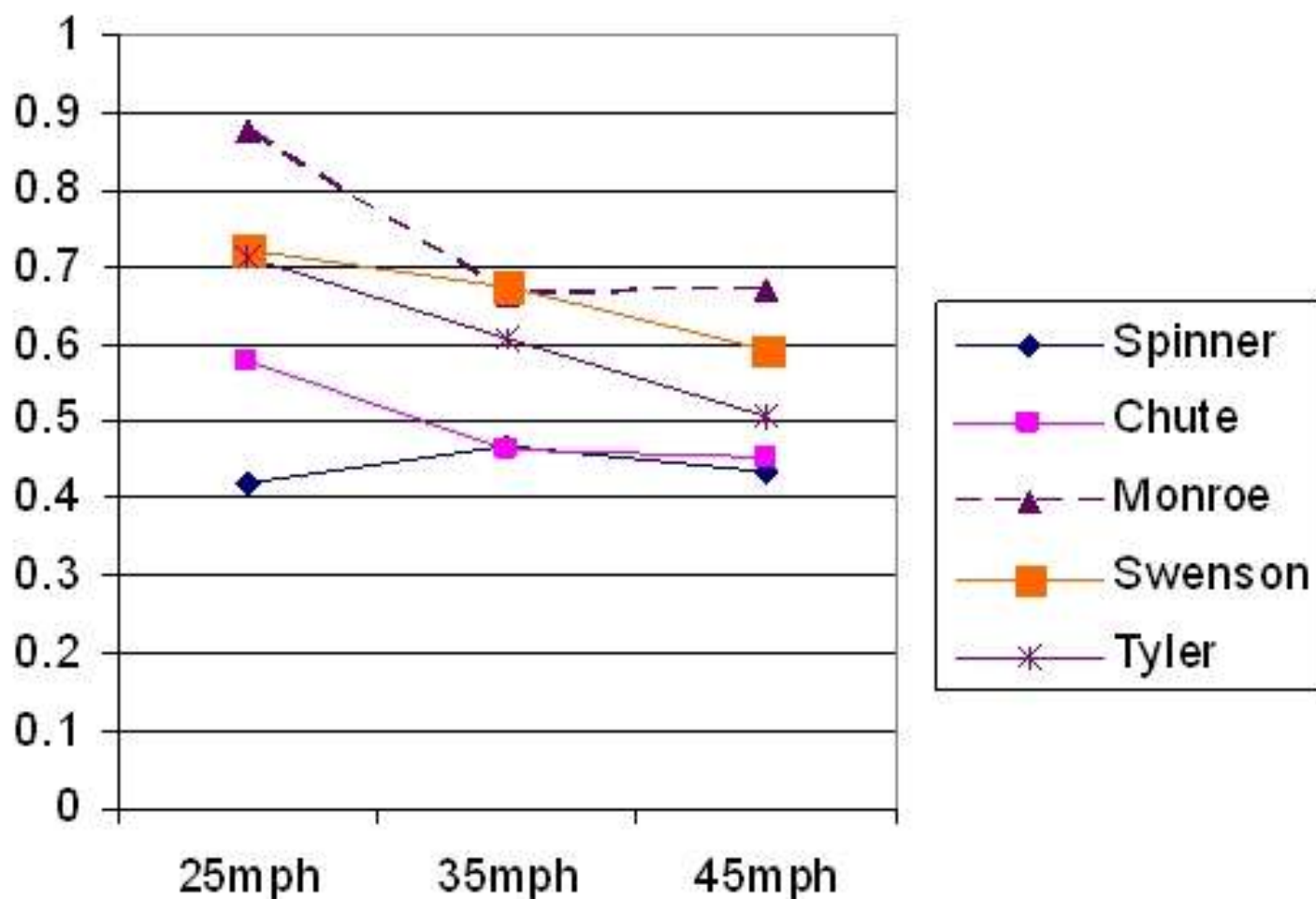


# Salt Collection Process



2002 11 7

## Percent Retention 250# 6 Foot Width





# Chutes



# Dual Spinners





# Winter Tailgate

# Cameras



- Tested 24 camera sets in 2007-2008
- Monitor material in dump box and application at spinner
- 200+ units in operation

# Flow Boy Trailer



**3400 gallon Anti-Ice/Pre-wet Tank**



**Nozzles on rear for Anti-Ice**

Let's go see the equipment!